

“MLAS and LAS: Project Comparison of Lessons Learned”

Synopsis: (50 word maximum)

“A comparison between two projects that share the same requirements and resulted in successful launches: PA-1 followed the standard project approach while MLAS was a parallel effort run by NESC. The lessons learned from each of the two efforts will highlight that there is always multiple ways to achieve success. ”

Abstract (250 words or less):

“The development of new and safer manned space vehicles is a top priority at NASA. Recently two different approaches of how to accomplish this mission of keeping astronauts safe was successfully demonstrated. With work already underway on an Apollo-like launch abort system for the Orion Crew Exploration Vehicle (CEV), an alternative design concept named the Max Launch Abort System, or MLAS, was developed as a parallel effort. The Orion system, managed by the Constellation office, is based on the design of a single solid launch abort motor in a tower positioned above the capsule. The MLAS design takes a different approach placing the solid launch abort motor underneath the capsule. This effort was led by the NASA Engineering and Safety Center (NESC). Both escape systems were designed with the Ares I Rocket as the launch vehicle and had the same primary requirement to safely propel a crew module away from any emergency event either on the launch pad or during ascent. Beyond these two parameters, there was little else in common between the two projects, except that they both concluded in successful launches that will further promote the development of crew launch abort systems. This presentation will compare both projects from the standpoint of technical requirements; program management and flight test objectives and highlight the synergistic lessons learned by two engineers who worked on each program.”